

RCM (Roofing and Cladding Materials Ltd)

Technical Data Sheet



ISO No. 5180

Version 2

Date prepared: October 2022

Trade Name: Ywall

Product Name:

Ywall

General Description

RCM Y-wall is a high-quality flexible calcium silicate based fibre cement building board, perfect for use as a fire rated sheathing board. Offering excellent fire properties as well as high levels of dimensional stability, Y-wall is an exceptional board for use in multiple applications. Y-wall is used primarily as a fire rated sheathing board or building board. Used extensively on both steel frame and timber frame structures, Y-wall is used behind all types of facade solutions, as well in ceilings offering a non-combustible classification. Y-wall is ideal for modular construction methods.

Applications

- Key applications
- Fire rated sheathing board
 - Ceilings- Partition walling
 - OEM applications for improved strength and density
 - Recommended for buildings above 18m

Appearance

Light Grey / Light Yellow

Composition

High-quality flexible calcium silicate based fibre cement building board,

Technical Information

Nominal Density:	≥1.2 g/cm ³			
Bending Strength (Modulus of Rupture):	12 - 14 Mpa			
Modulus of Elasticity (MoE):	4000MPa			
Thermal Conductivity:	≤0.23 W/mk			
Water Content:	≤10%			
Moisture Movement:	≤0.25%			
Reaction to Fire:	BS EN 13501-1 Class A1 Non-Combustible.			
Durability (Life Expectancy):	Provided the board is used in accordance with this suppliers instructions, and is fixed to satisfactory, stable and durable structures by fully trained operatives, it should have a service life equal to that of the structure in which it is installed.			
Standard Board Sizes:	2400 x 1200			
Thickness:	6mm	9mm	12mm	15mm
Nominal Mass of Product:	7.3 kg/m ²	11.1kg/m ²	14.6 kg/m ²	18.2 kg/m ²
Tolerance of Length:	1200-2400mm ±3			
Tolerance of Thickness:	±0.4mm			
Asbestos Content:	0			

Durability

Moisture Resistance:	Class A - Sheets which are intended for applications where they may be subjected to heat, high moisture and severe frost - BS EN 12467:2012
Exposure:	12 Months
Heat-Rain Performance:	Pass - BS EN 12467
Warm Water Performance:	Pass - BS EN 12467
Freeze-thaw performance:	Pass - BS EN 12467
Soak-dry Performance:	Pass - BS EN 12467

Reaction to Fire

Combustibility Class A1 - bs en 13501-1:2018 + A1:2009

Certification & Warranty

CE Marked	Yes	
Certification	Yes	BBA

Limitations of Use

Installation

The board is designed to be installed by a competent builder, or a contractor, experienced with this type of product. A suitably qualified and experienced individual must check the design and method of installation of the boards. Y-Wall board can be cut with a fine tooth hand saw or power saw, ensuring suitable dust control measures are taken (eg protective safety glasses, gloves and respiratory masks) and observing all necessary health and safety regulations. Damaged boards must not be used. The level of supervision during installation of the board and the associated structure, must be sufficient to ensure the quality of workmanship. Framing grade timber studs or galvanized steel framework should be provided at a maximum 600 mm centres for single-layer partitions. The frame to which the panels are fixed must be structurally sound and constructed in accordance with the requirements of the relevant national Building Regulations and Standards (see sections 4.3 and 4.4). Screws should be a minimum of 12 mm from board edges and spaced at a maximum of 300 mm. The screws must not be over-tightened.

Water Protection

The design water vapour resistivity of Y-wall board can be taken as $164 \text{ MN s g}^{-1} \text{ m}^{-1}$. Walls must have suitable weather protection on the outside and a vented cavity. The product should be treated as conventional sheathing board with regard to detailing and damp-proofing at openings, eaves and sole plate, and the fixing of wall ties. Where required by design, the addition of a breather membrane must be in accordance with BS 5250 : 2011. The outer weatherproofing should have adequate resistance to wind-driven rain, particularly in regions classified as severe exposure.

Fixings

Steel Frame:- 4.8mm x 38mm Wing tip self drilling fixing
Timber Frame:- 4.2mm x 42mm Climaseal self drilling fixing

Health & Safety

See separate safety data sheet.

Handling & Storage

Handling

Y-wall panels are stacked on timber pallets. Each pack contains a label incorporating the manufacturer's name, product name, thickness, width, length, batch number, number of boards per pallet, pallet weight, recommended storage and handling method. The boards must be stored in a ventilated and dry environment on a flat, level surface protected from contamination. To avoid excessive flexing of the boards, long edges must be supported when lifting and handling. The Certificate holder's instructions on site handling and storage must be followed.

Cutting

For cutting the product in any volume, we recommend the use of an RCM poly crystalline diamond Dart Blade to avoid excessive wear on other blades. Alternatively, RCM offer a complete fabrication service, please contact our technical department for details. Y-Wall board can be cut with a fine tooth hand saw or power saw, ensuring suitable dust control measures are taken (eg protective safety glasses, gloves and respiratory masks) and observing all necessary health and safety regulations. Damaged boards must not be used.

Screws

Screws should be a minimum of 12 mm from board edges and spaced at a maximum of 300 mm. The screws must not be over-tightened. Ancillary items used in conjunction with the boards but outside the scope of this Certificate: Fasteners (for use with timber frame) — 32 mm long self-driving screws with 10.4 mm diameter head, 4.2 mm diameter shaft. Fasteners (for use with steel frame) — 41 mm long self-driving screws with 10.4 mm diameter head, 4.2 mm diameter shaft. The design pull-through value of Y-wall board, calculated by applying a safety factor of 3.0 to the mean failure pull-through values (determined by tests in accordance with BS EN 1383 : 1999) for the 4.2 mm diameter shaft, 10.4 mm diameter head, length 32 mm self-driving screws

Joints

Fire rated walls - On site to allow for expansion and contraction, RCM Y-wall boards should be installed as per RCM fixing guidance. However, there is a very small risk during construction in highly exposed locations or where boards have been exposed to excessive moisture for prolonged periods minor expansion of board may occur. In this situation our recommendation would be for a gap of 2-5mm to be left between the boards and an RCM seal fire mastic used within the joints. Non fire rated walls.- RCM Y-wall, can all be butt jointed for limited exposure periods that are not subjected to excessive moisture penetration. As a precaution where excessive moisture penetration situations arise, our guidance has typically been to leave a small gap of between 2-5mm.

Nailing

RCM Y-wall can be cut, drilled and nailed using conventional hand tools; offering many of the properties of timber.

DISCLAIMER OF LIABILITY

The information supplied in this Technical Data Sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication however no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process.

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